

November 5, 1959

Dear Tony:

It was good to hear from you. It would be a pleasure to revisit old friends again in Minneapolis, but I am afraid this really will be impossible for the time being. I have already foolishly let myself in for trips to Mexico, Nice, London, New York and Kansas City on separate occasions during the next few months; but may I have a raincheck?

I have thought a little more about the differential neurotoxin problem, though I can't point to a very specific solution-- quite some work should be done on this. As best I can judge, RNA metabolism may be the best basis of distinction since the concentration and presumably turnover of RNA should be so very much higher in the soma. There are a few anti-RNA compounds that might be worth considering, e.g., deoxyuridine, or fluorouridine. Also, though there is reputedly very little DNA turnover, I suggest it might be quite worthwhile to look into agents like nitrogen mustard and the other alkylating anti-leukemic drugs. These should have a relatively localized sphere of action where injected. I don't have any data on the transparency of nervous tissue to UV; it is just possible that you could do a UV-cautery with a quartz rod of the sort used for transillumination studies. Finally, you might be able to sensitize nucleic acids by vital staining of the cells with agents like acridine orange, followed by UV or visible light. I haven't collected any information on the specificity of neurotoxins of the sort that are thrown away in antibiotic screening programs.

Did I ask you to prepare a brief precis of the requirements of such an agent? It would be helpful to know what sort of topographical localization you have in mind, and what degree of relative specificity (as between cells and fibers) might be acceptable. Also, do you need anything like a complete eradication of the nuclear neurons?

You mentioned Morrell's work -- is he connected with Nurnberger?

We are finally settled down, more or less well and insofar as I can manage to keep myself in town should be able to start getting some work of my own done. We've just finished the preliminary drawings for a house we're building on campus; this ought to be ready late next spring.

Congratulations on the F-1. (Or should I read you a sermon on overpopulation?)

Do give Gaylen our best two (he must have set you a good example); yours,

As ever,

Joshua Lederberg